

Exhibit 1 - Areas to be Decontaminated and Decommissioned

Building/ Area Name	Number	Area sq. ft.	Floors	Year Constructed	Construction/Layout	Past Usage/Scoping Statement	Radiological Contamination Type	Comments
Hot Cell Building	JN-1	Ground floor 25,651 First floor 2,226	2 Floors	1955 Enlarged in 1960 and 1979	JN- 1 General Face brick on concrete block; flat built up roof, Single story with basement under hot cells. Hot cell walls are 36-inch reinforced high density concrete. Change Room is normal construction with tile facing. Uses a dual fuel boiler room (12x18 feet) to supply heat. A service drain sump is located just outside the machine shop has high radiological contamination. The area has been sprayed with sealer to contain contamination. The original building, constructed in 1955 was enlarged in two phases during the 1960s and 1970s. Building divided into three discrete areas. The original section includes the following areas: mechanical test cell, high and low level cells and underlying sub-cells, controlled access service area (CAA), Charpy cell, hot equipment storage room, evaporator room, service mezzanine, loading dock area, waste storage shed, hot cell front operating area including change room, lavatory, and air lock to CAA. The front office addition to the building includes a machine shop, former laboratory area, and mechanical rooms. The High Bay addition the high energy cell with room access port and under floor storage wells, the fuel storage pool and pump/filtration room, cask wash-down room, and front operating area with a mezzanine level service area containing HEPA ventilation and HVAC equipment. The HEC is constructed of four foot thick high density concrete face with a back wall of six foot thick normal density concrete. The storage and transfer pool is lined with stainless steel.	Formerly the Hot Cell Laboratory. The facility was involved with destructive and non-destructive examination of irradiated reactor fuel, cladding materials, and associated reactor components. Experimental programs included research in support of fuel development for the AEC, its successor agencies, and the commercial nuclear power industry. High levels of high specific activity radioactive materials, including spent nuclear fuel with associated fission and activation products, and significant amounts of cobalt-60 were utilized in research operations. These materials left a significant legacy of contamination within the building.	High specific activity radioactive materials Fission products Activation products	Baseline Rev. 3
Hot Cell	JN-1	Interior: 8 ft wide, 18 ft deep, 12 ft high	1st	1955	JN- 1A High Level Cell 1st Floor The High Level Cell (HLC) is a room with three exterior walls and an interior wall in common with the Low Level Cell (LLC). The West wall contains one viewing window and numerous ports of various sizes. The South wall contains two viewing windows and numerous ports of various sizes. The East wall faces into the Controlled Access Area (CAA) and contains an access door. The floor contains three drains, and two access ports to the lower subcell. Interior: 8 feet wide, 18 feet deep, 12 feet high; Exterior: 14 feet (including interior wall shared by the HLC and LLC) wide, 24 feet deep, 14 feet 6 inches high (from the floor to just under the Tornado Cover); Wall Thickness: 3 feet (interior wall, also); Floor Thickness: 2 feet 6 inches; Ceiling Thickness: 2 feet 6 inches. The HLC was constructed in stages. First, a 2 inch steel shell was built. This shell included the outside walls, the inside walls, the port tubes running between the outside and inside shell, the manipulator block openings, the port block openings and window openings (all of which extend from the outside shell to the inside shell). Then, high density concrete was poured into the shell to a height of about 9 2 feet, then normal density concrete was poured to the top of the walls (height of shell is 14 feet 6 inches). The walls (including the inner wall shared by the HLC and LLC) are made of ferrophosphorus aggregate concrete (density 293 lbs/ ft3). Above 9 2 feet, for another 5 feet,		See Survey J-22777; J-24533, in Radiological Conditions section.	

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					the inner wall and the exterior walls are constructed of regular density concrete (density 147 lbs/ ft3).			
Hot Cell Building	JN-1				The ceiling and the floor are also constructed of regular density concrete. The floor is constructed of 3/ 8 inch carbon steel. The windows are removed and Plexiglas covers the window opening with lead shielding. The manipulator ports are covered by wood. The tornado covers and HEPA exhaust system remains.			
Hot Cell Building	JN-1	Interior: 8 ft x 20 ft x 12 ft high; Wall Thickness 2 ft	1 st	1955	JN- 1A Low Level Cell 1st Floor The Low Level Cell (LLC) is a room with three exterior walls and an interior wall in common with the High Level Cell (LLC). The West wall contains one viewing window and numerous ports of various sizes. The North wall contains two viewing windows and numerous ports of various sizes. The East wall faces into the Controlled Access Area (CAA) and contains an access door. The floor contains three drains, and two access ports to the lower subcell. Interior: 8 feet by 20 feet by 12 feet high; Wall Thickness: 2 feet (interior wall is 3 feet) Floor Thickness: 2 feet 6 inches Ceiling Thickness: 2 feet 6 inches; Window Openings: 36 2 inches by 4 feet wide; Door Opening: 5 feet by 8 feet high; Manipulator Panel Openings: 1 foot 2 inches by 4 feet wide on the West wall, and a 1 foot 2 inches by about 11 feet wide on the North wall.; The walls (including the inner wall) are made of ferrophosphorus aggregate concrete (density 293 lbs/ ft3) within a 2 inch thick mild- steel shell. The high density concrete extends about 9 2 feet from the floor to the bottom of the manipulator openings. The ceiling and the floor are constructed of regular density concrete (density 147 lbs/ ft3). Above 9 2 feet, the inner wall and the exterior walls are also constructed of regular density concrete. The floor is constructed of 3/8 inch carbon steel. The windows are removed and Plexiglas covers the window opening with lead shielding. The manipulator ports are covered by wood. The tornado covers and HEPA exhaust system remains.		See Survey J-24533 in Radiological Conditions section.	
Hot Cell Building	JN-1	1875	1st	1955	JN- 1A Mezzanine and Operations Area 1st floor - There are two mezzanines in JN- 1A. One mezzanine is on top of the High Level Cell (HLC), Low Level Cell (LLC) and a portion of the Old Operating Area (OOA); it is accessed by a set of stairs in the OOA. The other mezzanine is on top of the Mechanical Test Cell (MTC) and its operating area; it is accessed by a ladder next to the LLC. The primary purpose of the mezzanines is to contain the ventilation systems and HEPA filters servicing the High Level Cell, Low Level Cell, Controlled Access Area, and the Mechanical Test Cell. Mezzanine located over a portion of the high level operations area, MTC, LLC & HLC. Operations Area (1875sqft) is located outside the MTC, LLC, & HLC. On the panel, next to the HLC HEPA enclosure, are four magnehelic gauges that display the pressure differential across the two HLC HEPAs and the two LLC HEPAs. The four units below the magnehelic gauges are solenoid valves which control the two dampers on either side of the HLC HEPA		See Survey J-24533 , J-24539 in Radiological Conditions section	

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Building/ Area Name	Number	Area sq. ft.	Floors	Year Constructed	Construction/Layout	Past Usage/Scoping Statement	Radiological Contamination Type	Comments
					bank and the two dampers on either side of the LLC HEPA bank. These dampers will isolate each HEPA bank should the filter become ineffective. The two round units to the			
Hot Cell Building	JN-1				To the front of this area are the two banks of HEPA filters - each consisting of a pre-filter and two HEPAs. The HEPA covers are easily removed by unbolting and manually lifting off. There is no other entry to the ventilation system under the concrete (outside of the magnehelic tube entrances). Emerging from the HEPA banks are the two stacks that go through the roof. These stacks are connected together with a pipe with a manual butterfly valve in the middle. This valve is kept closed so the exhaust systems can act independently. However, should it become necessary to shut down a stack, the valve can be opened so that one stack can handle both the HLC and LLC air exhaust. Each stack also has a butterfly valve to manually close off the upper part of the system, if necessary. On the floor of the MTC mezzanine are two HEPA banks. One of the banks consists of a prefilter and two HEPAs servicing the MTC air exhaust.			
Hot Cell	JN-1	12 ft. x 12 ft	1st	1954	JN- 1A Charpy 1st Floor - 12x12 The floor has 74 storage holes. 49 @ 4- inch diameter ; 18 @ 6- inch diameter; 7 @ 8- inch diameter; all at 7- feet deep. Currently these holes are empty but contain high levels of contamination. Water can often be found in these holes.	Former shear test area for charpy specimens	See Survey J- 24519 in Radiological Conditions section	
Hot Cell	JN-1	1300 Spent fuel pool size: 12 ft x 6 ft x 14.5 ft deep	1st	1954	JN- 1A Controlled Access Area & Old Back Dock 1 st Floor - The Controlled Access Area (CAA) is located behind the Old Operating Area (OOA), the High Level Cell (HLC), the Low Level Cell (LLC), and the Mechanical Test Cell (MTC).. A small spent fuel pool is in this room ~ 1300sqft; Spent fuel pool size: 12x6x14.5 deep. Operating 10- ton and 2- ton crane pendant type	Its purposes were: to support various activities in the cells, to provide access to the cells through their doors, to provide facilities to move large items into the cells, and to provide space for special projects	See Survey J-24530; J-22468; J-24538; J-22777; J-24533; J-22206 in Radiological Conditions section	
Hot Cell	JN-1	573	1 st	1964	JN- 1A East Shop 1st Floor currently houses the Breathing Air Equipment	Formerly a machine shop	See Survey J- 24509 in Radiological Conditions section	
Hot Cell Building	JN-1	27	1 st	1954	JN- 1A Transuranic vault 1st Floor - Small storage room modified to store materials 27sqft (Rm 1112- B)		See Survey	

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							J- 24418 in Radiological Conditions section	
Hot Cell	JN-1	60 ft. x 80 ft. x 12 ft. H	1st	1961	JN- 1A Office 1 st Floor - Administrative and Machine shop area 60x80x12H Concrete block with brick facing; roof precast concrete Many inner walls have been removed. The machine shop has been removed. Much of the drain system in the Chem lab and the Machine shop have been removed, what remains will still be contaminated. An old sump under the machine shop floor has been partially removed.		See Survey J- 24532; J- 24472 in Radiological Conditions section	
Hot Cell	JN-1	117	1 st	1954	JN- 1A Evaporator 1st Floor - The purpose of the Evaporator Room is to enclose an evaporator tank, and it serves no other purpose. This room sits behind the Old Back Dock (OBD) and adjacent to the Charpy Room. The purpose of the evaporator tank is to evaporate liquid wastes from the Evaporator Storage Tank. Evaporator storage tank is located outside and adjacent to JN- 1A next to the basement cells. The Evaporator Room contains a stainless steel, rectangular evaporator tank approximately 5- feet wide by 10- feet long by 2- feet high with a capacity of 750 gallons. The evaporation rate is approximately 150 gallons per week. Hanging over the open tank is the exhaust hood. Just above the tank is the fill pipe coming from the Evaporator Storage Tank and unused sensors. Under the tank are four 2500 watt hot plates controlled by two breakers located on the current back dock just outside the door. These hot plates sit on scissor jacks to hold them against the bottom of the tank. This evaporator has been used for a number of years and the resulting sludge has periodically been removed and waste managed into 55 gallon barrels. The liquid waste entering the evaporator tank originates from the Evaporator Storage Tank which currently receives the liquid from the Radiological Analytical Laboratory (RAL). Also, the Hot Sump in the basement of Building JN- 1A pumps water into the Evaporator Storage Tank, but it has been dry for many years; and the JN- 1 hot drain sump located in back of the Machine Shop back door drains into the Evaporator Storage Tank. The two floor drains located in the Controlled Access Area (CAA) and the one in the OBD also drain into the Evaporator Storage Tank. The drain in the OBD, however, was inadvertently plugged with cement, so liquids may drain slowly.		See Survey J- 24533 in Radiological Conditions section	
Hot Cell Building	JN-1	Interior: 19 ft 6 in x 7 ft 7 in x 14 ft 2 in high;	1st	1967	JN- 1A Mechanical Test Cell 1st Floor - The Mechanical Test Cell (MTC) is a room that was constructed after JN- 1A was completed. This occurred in the late 1960s. An area North of the Controlled Access Area (CAA) was closed off with a steel wall and a rear access door was installed over an existing doorway to the CAA. The North wall was constructed of steel panels and concrete, and		See Survey J-22468, J- 24533, J-22206 in	

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					contains five viewing windows and numerous ports. The West, East and South walls are the original concrete block walls. (There are no existing construction drawings or files on this cell.) Interior: 19 feet 6 inches by 7 feet 7 inches by 13 feet 6 inches high; Exterior: 21 feet 2 inches by 9 feet 1 inch by 14 feet 2 inches high; Wall Thickness: North steel wall = 8 inches, East wall = 8 inches, South wall = 10 inches for 7 feet 3 inches then 8 inches to the ceiling, West wall = 12 inches for 7 feet 3 inches then 8 inches to the ceiling.; Floor Thickness: 8 inches; Ceiling Thickness: 8 inches; Door Opening: 6 feet 4 inches wide by probably 8 feet high; Manipulator Openings: 10 inches in diameter. The front wall consists of a steel shell about 8 inches thick. The inner and outer steel panels of the shell are each 2 inches thick. In the lower 7 feet (reportedly) of the shell there are two, 2 inch thick steel plates sandwiched together (the welds of which are staggered across the layers). Consequently, the front wall is four, 2 inch thick plates sandwiched together. (Some reports state that there are eight, 1 inch thick plates sandwiched together, but an examination of a port hole previously drilled through the wall was inconclusive.) The upper 7 feet consists of ferrophosphorus aggregate concrete (density 293 lbs/ ft3) poured into the shell. The South and West walls are 8 inch concrete blocks faced with 2 inch (or 2 2 inch) thick steel plating covering the lower 7 feet 3 inches of the walls. The West wall also contains a concrete facing between the steel and the concrete blocks. Above this steel plate wall is a steel plate "wedge" or "cap" that blends the steel plate wall with the concrete block wall. The steel plating was placed on these walls for shielding purposes and the walls behind them will be contaminated. The East wall is all 8 inch concrete block. The access door is located in the CAA and covers the rear of the South wall. It consists of an estimated 8 feet wide by 10 feet high by 4 inch thick steel slab. There are five identical windows in the MTC. Each opening is approximately 12 inches high by 22 inches wide. There are two 4 inch thick lead glass (6.2 g per cm3) sections. The exterior section is 12 inches by 22 inches and the interior section is, reportedly, 15 inches by 26 inches. The sections are separated with weather stripping so there is no glass- to- glass contact. Each window is covered with a 2 inch steel picture frame bolted to the steel facing. Within each frame is a 2 inch section of plexiglass held in place with clips. The interior of each window is also covered with plexiglass held in place with a frame.		Radiological Conditions section.	
Hot Cell Building	JN-1	Interior: 15 ft 3 in x 8 ft x 9 ft 6 in high;	Basem ent	1955	JN- 1A High Level Sub Cell Basement - The High Level Cell Subcell (HLC Sub) is a room that sits directly below the High Level Cell (HLC) and is an extension of the walls of the HLC. The subcell can be described in three parts; a passageway, an entryway and the cell itself. The passageway can be accessed from the HLC operating area. It leads to a smaller passage or the entryway into the cell. The cell is simply an enclosed room with the same area		See Survey J- 23493 in Radiological Conditions section.	

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					dimensions as the HLC. Interior: 15 feet 3 inches by 8 feet by 9 feet 6 inches high; Exterior: 20 feet 3 inches by 13 feet by 12 feet high; Wall Thickness: 2 feet (interior wall 3 feet); Floor Thickness: 2 feet 6 inches; Ceiling Thickness: 2 feet 6 inches; Hatchway Opening: 4 feet by 4 feet 9 inches; Passageway: 13 feet 1 inches by 5 feet 9 inches by 11 feet high; Floor Thickness: 8 inches; Ceiling Thickness: 8 inches; Entryway: 7 feet by 5 feet 9 inches (to 4 feet at opening to cell) by 9 feet 6 inches high; Floor Thickness: 8 inches to 2 feet 6 inches; Ceiling Thickness: 6 inches; Doorway Opening: 4 feet by 9 feet 6 inches high. The walls are probably (no evidence) constructed of ferrophosphorus concrete, since the upper walls were made of this type of concrete. The floor and ceiling are probably normal density concrete. The floor is covered with 1/8 inch thick stainless steel which wrap up the sides of the walls by 4 inches.			
Hot Cell	JN-1	Interior: 16 ft 3 in x 8 ft x 9 ft 6 in high	Basement	1955	JN- 1A Low Level Sub Cell Basement - The Low Level Cell Subcell (LLCSub) is a room that sits directly below the Low Level Cell (LLC) and is an extension of the walls of the LLC. The subcell can be described in three parts; a passageway, an entryway and the cell itself. The passageway can be accessed from the LLC operating area. It leads to a smaller passage or the entryway into the cell. The cell is simply an enclosed room with the same area dimensions as the LLC. Interior: 16 feet 3 inches by 8 feet by 9 feet 6 inches high. Interior: Wall Thickness: 2 feet (interior wall 3 feet); Floor Thickness: 2 feet 6 inches; Ceiling Thickness: 2 feet 6 inches; Hatchway Opening: 4 feet by 4 feet 9 inches; Passageway: 12 feet 11 inches by 4 feet 9 inches by 11 feet high; Floor Thickness: 8 inches; Ceiling Thickness: 8 inches. Entryway: 6 feet by 4 feet 9 inches (to 4 feet at opening to cell) by 9 feet 6 inches high.; Floor Thickness: 8 inches to 2 feet 6 inches; Ceiling Thickness: 6 inches; Doorway Opening: 4 feet by 9 feet 6 inches high. The walls are probably (no evidence) constructed of ferrophosphorus concrete (293 lbs/ ft3), since the upper walls were made of this type of concrete. The floor and ceiling are probably normal density concrete (147 lbs/ ft3). The floor is covered with 1/8 inch thick stainless steel which wrap up the sides of the walls by 4 inches.		See Survey J- 23619 in Radiological Conditions section.	
Hot Cell Building	JN-1	24 ft x 80 ft x 12 ft H.	Basement	1964	JN- 1A Alpha- Gamma Cells Basement - This room has been emptied of all materials back to the original walls. Dimensions: 24x80x12H. Years ago, the floor area around cell 10 was used to as the waste water evaporator room. This area was removed and the floor raised to accommodate the new cell 10 configuration. It is believed that two floors are in this area. The exhaust system still remains intact and is potentially contaminated. The area has a poly-urea sealant reducing contamination mobility.	Formerly the Metallography lab.	See Survey J- 24414; J- 24533 in Radiological Conditions section.	
Hot Cell Building	JN-1	5 ft x 21.5 ft x 9.5 ft H; Wall	Basement	1954	JN- 1A Hydraulic door Basement - The Hydraulic Door Room beneath the CAA contains the rams, a portion of the hydraulic cylinders, the door bumpers (jambs), and space for the lowered		See Survey J- 23493 in	

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		Thicknss 1.25 ft			doors. The remainder of the hydraulic cylinders are located below the room=s floor in cement or gravel. The room dimension are: 5 x21.5 x 9.5 H; Wall Thick ness 1.25 ft. The walls (including the inner wall) are made of ferrophosphorus aggregate concrete (density 293 lbs/ ft3). The ceiling and the floor are constructed of regular density concrete (density 147 lbs/ ft3).		Radiological Conditions section	
Hot Cell Building	JN-1	Size is the top of the HEC Area	2nd	1970	JN- 1B Mezzanine 2 nd Floor - The Mezzanine is located above the HEC operating area, and is accessed by a stairway located between the operating area and the High Bay. The size is the top of the HEC.		See Survey J- 24449 in Radiological Conditions section	
Hot Cell Building	JN-1	14 ft x 14ft	1st	1970	JN- 1B Cask Washdown 1 st Floor - Sitting south of the pool and in back of the HEC is the Washdown Room. Dimensions: 14x14 Concrete filled cement block walls open at the top for crane access. Floor drain is capped off.	The Washdown Room was built to clean casks after their arrival in the High Bay The casks were normally covered with road dirt, film and sometimes contamination. The casks were brought into the room using the 50 ton crane. The doors were closed and the cask was washed down with warm water and was sometimes scrubbed down with soap and water. Although the primary purpose of the Washdown Room was to clean cask surfaces, it also served as an entry/ exit area for the HEC.	See Survey J- 24536 in Radiological Conditions section	
Hot Cell Building	JN-1	Interior: 26 ft high, 38.5 ft wide up to 16 ft high	1st	1971	JN- 1B High Energy Cell 1st Floor - The High Energy Cell (HEC) is a room with four external walls. The West wall contains four viewing windows, four manipulator openings and numerous ports. The North wall contains one viewing window, one manipulator opening, and ports. The East wall contains two transfer ports, a door to the passageway into the cell, and three internal exhaust vents. The South wall contains two air intake vents into the cell and two ports associated with the gamma scanner. The ceiling contains three large plugs which when removed provides access to the interior of the cell. The floor contains a trap door to the transfer channel and seven storage holes. Interior: 26 feet high, 38 1/ 2 feet wide up to 16 feet high, then 40 1/ 2 feet wide, 9 feet deep up to 16 feet high then 11 feet deep; Wall Thickness: East B 6 feet up to 16 feet high then 5 feet, West B 4 feet up to 16 feet high then 3 feet, North B 4 feet up to 16 feet high		See Survey J-24536; J- 24884 in Radiological Conditions section.	

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					<p>then 3 feet, South B 6 feet up to 16 feet high then 5 feet; Floor Thickness: North to South B 4 feet for 23 2 feet, then 10 inches; Ceiling Thickness: 4 feet; Window Openings: 4 feet 9 inches wide, 3 feet 9 inches high (does not include liners); Passageway Opening to Cell: 4 feet 2 inch wide, 7 feet 2 inches high; Ceiling Plug Opening: Cell Interior B 9 feet wide, 11 feet long, Exterior B 10 2 feet wide, 12 2 feet long; Manipulator Panel Openings: 1 foot 7 3/8 inches high, 6 feet 4 3/ 8 inches wide; Port Block Openings: 24 7/ 8 inches wide, 21 1/ 8 inches high.</p> <p>Construction materials are somewhat unclear. But, according to the drawings, the three and four foot thick walls are made of 220 lbs/cu. ft high density concrete (barytes) and it appears that the four foot thick portion of the floor is made of the same density concrete. The remaining five and six foot thick walls are made of normal density (147 lbs/ ft3) concrete. The floor is made of both barytes and normal concrete. The first 9 feet or so, or the trap door area, is made of 4 foot thick normal density concrete. Then, for the next 14 feet is 4 foot thick barytes concrete. Imbedded in this area is the caisson storage unit. The remaining portion of the floor is 10 inch thick normal density concrete. The ceiling is also made of normal density concrete. The floor was first to be partially installed. Before the concrete was poured, the opening to the transfer channel and the steel, storage hole caisson (a single unit) were installed. To construct the concrete walls a hollow two faced, 16 foot high steel frame or mold was installed on top of the partially finished floor. The frame/ mold contained reinforcing rods and included the insides of the window, manipulator holes, port hole The access door and passageway is located in the East wall and originates in the Cask Washdown Room. In this room there is a steel door which covers the entryway into the passageway. The steel door measures 6 feet 4 inches wide, 8 feet 9 inches high and 18 inches thick. It weighs 18 tons. The door sits on the floor and is moved by using the 50 ton crane.</p>			
Hot Cell	JN-1				<p>The passageway which is lined with steel plate, measures 6 feet (5 feet 5 inches to door) long, 4 feet 2 inch wide and 7 feet 4 inches high at its opening and 7 feet 2 inches high at the cell opening. The floor has a 2 inch slope toward the Cask Washdown Room. At the other end of the passageway, there is a door that leads into the cell itself. This is a standard steel door measuring an estimated 42 inches wide and 6 feet 8 inches high. Near the bottom of the door is a set of louvers for airflow into the cell. The top of the HEC contains three normal density concrete plugs, each framed with 2 inch angle iron. The top and bottom corners of the plugs are also covered with an additional 3 inch angle iron. Also the points of contact, i. e., where the plugs sit on each other and the walls, are covered with an additional 3 inch angle iron.</p>			
Hot Cell	JN-1	High Bay	1 st	1970	JN- 1B High bay; Operations Area 1 Floor - The High Bay (JN-		See Survey	

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		86 ft. x 74 ft. x 62 ft. H (4158) Operations Area 901			1B) was especially designed to house the HEC, the pool and associated facilities; and to handle large casks. The casks were not only large, but weighed over 30,000 lbs. Cask handling required heavy duty cranes and maneuvering space, thus the high, bay design. High Bay (86x74x62H; 4158sqft): Operations Area (901sqft) The high bay contains a pendant 10/ 50- ton bridge crane. The high bay ceiling and wall horizontals have contamination from incident of 1980 in which a cask released a large pocket of fine dust and air from the pool into the high bay.		J- 24543 in Radiological Conditions section	
Hot Cell	JN-1	~20x60	2 nd	1970	JN-1B Air Handler/ HEPA Fans - The (Fan Room) of JN-1B are three air handlers designated as AC-1, AC-2 and HV-1. The purpose of AC-1 and AC-2 is to blow air into the HEC Operating Area and High Bay to help maintain a positive pressure in these areas; and to maintain the temperature (through heating and cooling) in these areas. The purpose of HV-1 is to provide heated air into the High Bay near the west roll up door. These three air handlers draw air from same plenum that is fed from vent openings located on the south side of the building. There are three HEC HEPA exhaust blowers are located in this room. ~20x60 There are louvered openings (60" by 72") on the south side of the building through which the outside air is drawn into a horizontal plenum by the fans of the air handlers. These louvers are not adjustable. In the plenum, a few feet from the louvered openings, is a set of six filters. Each of these pleated filters measures 24" by 24" by 2". Just before these filters are two access doors (36" by 42") on either side of the plenum to replace the filters. The horizontal plenum then connects to a large vertical plenum that feeds AC-1 and AC-2. There is an access door (24" by 36") into the main plenum, presumably for cleaning. Sitting on top of the main vertical plenum is a smaller horizontal plenum which feeds HV-1. AC-1 and AC-2 are identical in construction (although a mirror image of each other), but AC-1 is a smaller unit. First the air is drawn through a set of dampers, then through a pre- heater, cooling coils and finally heating coils. The dampers control the amount of air being drawn into the air handler and the pre-heater tempers the air. The cooling and heating coils work in concert to maintain the desired temperature. After this, the air flows through the fan. The room contains three fans/ blowers, one each for the three air exhaust openings on the back wall of the HEC; they are identical. The air exiting the HEC travels through three filters and on up inside the wall to another filter bank in the Fan Room. This filter bank consists of two side- by- side HEPAs. The air travels though both of these filters to the fan where it is sent to the stack going through the roof. All three fans send air to this one stack. Only one fan is on at any one time, and their operation is rotated every quarter. Since there is no work being done in the cell, the air is relatively free of contaminants; consequently, only one fan and HEPA filter bank are		See Survey J- 24449 in Radiological Conditions section	

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					required. This approach reduces wear on the fan systems and lowers filter exchange costs.			
Hot Cell	JN-1	Internal dimension s of the pool measures 20 ft by 20 ft and it is 49 ft deep	1st	1970	<p>JN- 1B Pool 1st - The fuel storage pool sits adjacent to the rear wall of the High Energy Cell (HEC). The purpose of the pool was to store fuel assemblies, strong-backs, fuel rod bundles, fuel rod holders and tools. Casks were brought in and lowered into the pool. Fuel assemblies or fuel rod bundles were removed from the cask and transferred to the HEC through a channel or canal that runs from the pool to the HEC, under its floor. Normally, the pool is covered by two steel, tornado protection lids. Associated with the pool are two sumps; one to collect water leaking from the pool and the other to collect ground water accumulating under the pool. The concrete pool walls are 49 feet deep from the top of the parapet the pool floor and 1 foot 8 inches to 2 feet 2 inches thick. The internal dimensions of the pool measures 20- feet by 20- feet and it is 49 feet deep. The cement used was referred to on the drawings as CHEM COMP Shrinkage Compensating cement. Both vertical and horizontal reinforcing rods were used in the walls, and these rods were anchored to the caissons. On top of the pool sub-floor is an 8 inch layer of bricks placed vertically, with a 4 inch layer of concrete on top of this layer of bricks. Thus, the total thickness of the pool floor is 3 feet to 3 feet 3 inches. The stainless steel liner was placed on top of these layers. The interior of the concrete walls was covered with 4 feet by 8 feet by probably 1/16 inch thick sheets of 14 gauge 304 stainless steel. These sheets were overlapped by 2 inches, and seam welded. The floor was also covered with the same stainless steel with an additional 3 inch of stainless steel over a portion of the floor. The walls were constructed in stages starting from the top. Once the concrete was poured and set, the dirt was excavated for the next stage. When the concrete was poured, the boards created a notch in the bottom of the wall. When the next wall was poured a notched seam was created. This notch strengthened the seam and therefore the wall; and acted as a dam against water seepage. Surrounding the outside of the concrete walls are 20 concrete caissons spaced about 6 feet 6 inches apart (the corner caissons are 6 feet from the others). Each caisson is 30 inches in diameter and about 56 feet long. The top of each caisson is about 1 foot 6 inches below the floor of the High Bay and runs down adjacent to the pool wall to about 6 feet 11 inches below the pool floor. As stated previously, the reinforcing rods in the concrete walls were anchored to these caissons. The importance of these caissons is that they provide support to the walls by being adjacent to the walls, their close spacing, and the anchors to the walls. The excavated dirt walls in between the caissons were sprayed with bitumen and then covered with 6 mil polyethylene before the walls were poured. By this time, the bitumen and polyethylene have probably deteriorated. Outside Sump: Between each pair of caissons is a vertical 3 inch perforated drain pipe that runs down</p>		See Survey J- 17029 in Radiological Conditions section	

Exhibit 1 - Areas to be Decontaminated and Decommissioned

Building/ Area Name	Number	Area sq. ft.	Floors	Year Constructed	Construction/Layout	Past Usage/Scoping Statement	Radiological Contamination Type	Comments
					into a 4 inch perforated drain pipe that runs horizontally around the base of the pool. The 4 inch pipe is connected to an 8 inch pipe that runs up the middle of one of the caissons and to an outside sump.			
Administrative Building	JN-2	Total 13,200 Ground floor 6,742 First floor 3,439	3	1956	<p>The Radioanalytical and Environmental Laboratories currently occupy building JN-2. JN-2 is basically a 2 story (no basement) concrete block building with brick facing; containing a high bay and a small annex. The high bay area covers about one-fourth of the first floor and extends beyond the second story roof. The remainder of the first floor housed laboratories and a vault in which plutonium and enriched uranium were stored. The vault and laboratories were previously decommissioned. The second floor was predominantly office space. Sitting on top of the main building and adjacent to the high bay is a room known as the "penthouse" main building constructed of steel panels on the inside and aluminum panels on the exterior (total wall thickness of 1 foot); small annex is made of concrete block with brick facing. Penthouse is constructed of exterior aluminum panels and interior fiber board type panels. The high bay contains a pendant 10-ton bridge crane. Uses a dual fuel boiler room (12x22 feet) to supply heat. A service drain sump is located on the north side of building could have radiological contamination.</p> <p>The building is approximately 98 feet 2 3 inches long, 73 feet 10 inches wide, 24 feet high (excluding high bay) and 9 inches thick. The high bay (interior is 42 feet by 39 feet 9 inches) is an integral part of the building and walls constructed of poured concrete (2 feet thick) up to a height of 24 feet, total height of 52 feet, 8 inches; annex (added later) with approximate exterior dimensions of 37 feet by 28 feet by 15 feet high. Penthouse exterior dimensions are 23 feet by 19 feet by 12 feet high.</p> <p>Radioanalytical Laboratory Facilities and Equipment</p> <p>Facilities: 1831 sq. ft. of laboratory space includes: environmental wet chemistry lab with one (1) fume hood; project/environmental combined wet chemistry lab with five (5) fume hoods; three (3) count rooms; 635 sq. ft. of storage space. Counting equipment includes Gamma Spectroscopy Counting System with 6 High-Purity Germanium Detectors.</p>	<p>Formerly known as the Critical Assembly Building. Used for criticality experiments from 1957 through 1963. Since cessation of criticality experiments, the building has been used for several nuclear related projects, including direct conversion concepts, irradiation experiment assembly, and special nuclear material storage and dispensing. A small plutonium laboratory (decommissioned in the 1970s) was located in the area currently occupied by a radioanalytical laboratory (RAL). The instrument service facility contains various calibration sources including Co-60, Cs-137, and Pu-Be in storage. A wastewater storage tank outside the building has stored radioanalytical lab wastewater for over 20 years. Currently only tracer levels of radioactive materials are present in the RAL.</p>	<p>Uranium</p> <p>Plutonium</p> <p>Activation products</p> <p>Fission products.</p> <p>See Survey</p> <p>J-24510;</p> <p>J-24433;</p> <p>J-24411 in Radiological Conditions section</p>	Baseline Rev. 3
Retired Research Reactor Building	JN-3	Exterior 8020	3	1956	Two story concrete block and brick structure with a steel frame basement. The three floors are reinforced concrete, and the former reactor pool was constructed of concrete. The high bay area over the reactor is aluminum panels with flat built up roof. Uses a dual fuel boiler room (20x24 feet) to supply heat. The high bay contains	Formerly the Research Reactor. Housed a 2 megawatt swimming pool design reactor that operated from 1956 through 1974. The	<p>Fission products</p> <p>C-14</p>	

Exhibit 1 - Areas to be Decontaminated and Decommissioned

Building/ Area Name	Number	Area sq. ft.	Floors	Year Constructed	Construction/Layout	Past Usage/Scoping Statement	Radiological Contamination Type	Comments
		Annex 1845 Ground 5,491 First 6,859 Second 4,096			<p>a cab 10-ton bridge crane that travels the length of the building.</p> <p>The exterior of the building is approximately 72 feet wide and 111 feet long and 38 feet 8 inches tall. Attached to the rear of the building is an annex currently being used as a machine shop (41 feet by 45 feet by 22 feet 8 inches high). Three sides of the reactor cooling pool remain. The remaining three sides of the reactor pool has high density concrete from the floor to half way up the wall.</p> <p>The service sump is located in the east yard outside of the building and has radiological contamination. An water storage tank is located outside just north of the building. The external water storage tank (36x36x15H) piping interhooks with the building to the reactor pump room. The tank leaks and will get standing water which can be pumped out as needed. The pump room has 4ft thick concrete ceiling. Piping exited the building to the removed cooling tower of the NW yard of JN-3. It is believed that this piping remains in the ground, below a section of road and potentially contaminated. The annex contains 144 storage wells, that have been surveyed and foamed.</p>	building was partially decontaminated after shutdown. Removal of fuel, major operating components and fixtures and selected decontamination occurred in 1975. The bioshield wall was removed in 2000.	<p>Activation products</p> <p>See Survey J-24394;</p> <p>J-24546; in Radiological Conditions section.</p>	
Guard House/ Access Center/Emergency Command Center (ECC)	JN-6	Ground 336 First 358	2	1976	Face brick on concrete block; ground floor is reinforced concrete slab on grade. First floor is made of wood.	Guard House		
Administrative Complex	JN-10	11,000	1	1998	(70x84) (28x140) Wood and aluminum	Offices	None Expected	DOE Owned
Administrative Complex	JN-11	2100	1	2002	35x60 Wood and aluminum	Offices	None Expected	DOE Owned
Dosimetry Trailer	JNT-1	560	1	1994	14x40 Wood and aluminum used for storage and respiratory protection equipment maintenance.	Used for dosimetry issuance and storage of respiratory protection equipment		DOE Owned
Break Trailer	JNT-2	840	1	1994	14x60 Wood and aluminum			Battelle Owned - release to Battelle

Exhibit 1 - Areas to be Decontaminated and Decommissioned

Building/ Area Name	Number	Area sq. ft.	Floors	Year Constructed	Construction/Layout	Past Usage/Scoping Statement	Radiological Contamination Type	Comments
Storage Trailer	JNT-3	840	1	1989	14x60 Wood and aluminum			DOE Owned
North Well House	NA	583	1	1955	Pump House/Water softener. Pumps ground water to the Middle Area water tower.	Site water supply	See Survey J-24431 in Radiological Conditions section	Free release
Old Guard House	NA	120	1	1956	10 x 12 x 10H Wood construction. Presently used as storage for environmental. Cathodic Protection for gas line.	Former guard house		
Waste Management Shed	NA	1800	1	1962	An under roof storage building behind JN-1 30x60ft Open steel trusses with metal walls Presently used for RMA storage.		See Surveys J-24630; Grounds J -24622 in Radiological Conditions section	
Waste Storage Shed (Sheep Shed)	JN-1B	Interior: 23ft 6-in. by 43 ft, ~ 22 ft high. Alcove: 10 ft by 20 ft Mezzanine is 30 ft. feet long and 20 ft. deep	1	1970	Behind Building JN-1A is a storage building commonly referred to as the Waste Storage Shed (WSS). The interior of the room measures 23-feet 6-inches by 43-feet and it is about 22 feet high. There is a 24-inch sump (probably 12-inches deep), with a grate, located in the center of the room. The alcove is a room off the main area which measures 10-feet by 20-feet. The storage room is located in the northwest corner of the WSS. It consists of three 1-foot 6-inch thick concrete walls. The fourth wall is the rear wall of the back dock of JN-1A. Its top or ceiling is the floor of the mezzanine. The front wall contains a motorized sliding door and an 1-foot thick steel shield is placed in front of this door for shielding. The right-hand portion of the front wall and all of the east wall is about 8 feet high and does not reach the ceiling. In this opening are stacked, concrete blocks for shielding. Above the door is a relatively large opening into the room such that someone can look into the opening and see the interior of the room. Also in this opening is the door opening mechanism. The mezzanine covers the storage room and the alcove. It is accessed by a ladder on the west side of the storage room front wall. The mezzanine is 30-feet long and 20-feet deep. The mezzanine contains shelving units, many of which are empty.	Its purpose is to store containerized, contaminated material, equipment and waste. It was constructed to contain highly contaminated containerized waste	See Survey J-24505 in Radiological Conditions section	
Utilities								
Electrical	NA	NA	NA	1991	The power for JN-1, JN-2, and JN-3 is distributed from a step-down transformer located centrally within the fence. The 2/0 cu 4160 volt primary feed to the transformer runs underground from a pole south of JN-2 in 3-inch plastic conduit at a depth of approximately 30 inches. The 1000 KVA transformer is between JN-2 and JN-3 and		None Expected	

Exhibit 1 - Areas to be Decontaminated and Decommissioned

Building/ Area Name	Number	Area sq. ft.	Floors	Year Constructed	Construction/Layout	Past Usage/Scoping Statement	Radiological Contamination Type	Comments
					<p>supplies all the (240 V, 3- phase, 1000 A) power for these buildings.</p> <p>This unit was installed in 1991 and is a power center with a primary switch, transformer, and solid state low voltage breakers. Similar primary feed lines run from the pole to an empty pad south of JN-2 that previously contained a 300 KVA transformer (since removed) with 4160 V primary that supplied 480 V power to JN-2. Also, a temporary substation is located immediately north of JN-1. Power may also be available without the central step-down transformer. The electrical service will be disconnected from JN-2 at some point during the demolition process. Three emergency diesel generators and one portable emergency diesel generator are available.</p>			
Underground Electrical	NA	~2600 ft. in length	NA	UNK	Underground electrical lines connecting the pole, transformers, and JN-1, JN-2, and JN-3. These lines are assumed to be uncontaminated and are estimated to be approximately 2600 feet in length, in multiple runs of 2 to 3 inch galvanized steel at a depth of 2 to 4 feet.		None Expected	
Fiber Optics	NA	~ 500 feet in length	NA	UNK	Fiber optics enter West Jefferson North through JN-7, which is north of JN-4 and are distributed underground to JN-1, JN-2, and JN-3. These lines are expected to be uncontaminated and are estimated to be approximately 500 feet in length, 2 to 4 inches in diameter, buried 1 to 3 feet deep, and contained in PVC or steel conduit.		None Expected	See utility maps.
Sanitary and Storm Sewer Lines	NA	~6813 feet in length	NA	UNK	Currently, the storm, sanitary, and abandoned chemical waste sewer lines leaving JN-1, JN-2, JN-3, JN-4 and the general north site area enter outfall lines or join the line carrying sewage to the Active North Filter Bed. These lines are estimated to be constructed of vitrified clay or cast iron, 3 to 8 inches in diameter and buried 4 to 8 feet deep. A 205 feet line running underneath the active dam and overlying road at the WJ north site is suspected to be contaminated and shall be remediated in place.	Approximately 205 feet of an abandoned discharge line running from the filter bed area to the Big Darby Creek was removed several years ago under the BCLDP. Various other nominal segments of buried drain lines have been removed over the years through a normal leak repair process.	See AResults of the Radiological and Video Surveys Using the Pipe Explorer TM System at the Battelle King Avenue and West Jefferson Sites@, August 2000	
Chemical Waste Sewer	NA	No data available	NA	UNK	Major sections of this line remain in place. The chemical waste sewer carried condenser water and secondary cooling loop spillage from the reactor cooling tower west of building JN-3 to an outfall along the eastern edge of the site.	The chemical waste sewer carried condenser water and secondary cooling loop spillage from the reactor cooling tower west of Building JN-3 to an outfall along the eastern edge of the site.		

Exhibit 1 - Areas to be Decontaminated and Decommissioned

Building/ Area Name	Number	Area sq. ft.	Floors	Year Constructed	Construction/Layout	Past Usage/Scoping Statement	Radiological Contamination Type	Comments
Lines								
Shell Oil Line	NA	~ 840 feet in length	NA	UNK	This line has been abandoned by Shell Oil, is not expected to be contaminated, and has no known impact on the project. For these reasons, the project is not expected to have responsibility for this line and it is expected to be left in place. This line within the north site fenced in area is estimated to be 840 feet in length, 10 inches in diameter, and buried 5 to 7 feet deep. Construction material is not known. Condition at abandonment is not known. The line lies in close proximity to the JN-1 building foundation.		None expected	The Project is not expected to have responsibility for this line and it is expected to be left in place.
Gas Lines	NA	~ 1900 feet in length	NA	1955	The current supply line was installed in 1955 and runs along the road to the east and to JN-4. It then continues on to supply JN-1, JN-2, and JN-3, etc. There is an abandoned gas supply line into the West Jefferson North site coming from the south under the lake near JN-2. The abandoned line under the lake will be allowed to remain in place. The current active lines serving JN-1, JN-2, and JN-3 are estimated to be approximately 1900 feet in length, 2 to 4 inches in diameter, buried 2 to 3 feet deep, and constructed of schedule 40 black or coated steel.		None expected	
Nitrogen Lines	NA	~ 600 feet in length	NA	UNK	The nitrogen lines are currently abandoned. There is no storage tank. These lines are expected to be uncontaminated and are estimated to be approximately 600 feet in length, 1 to 2 inches in diameter, buried 2 to 3 feet deep, and constructed of steel pipe.	Carried nitrogen to the site.	None expected	
Compressed Air	NA	~ 100 feet in length	NA	UNK	The compressed air for JN-3 was originally supplied from the compressor in JN-2 via a buried pipe. This pipe was abandoned in place when it failed, and a compressor was installed in JN-3. This line is estimated to be approximately 100 feet in length, 2 inches in diameter, buried 3 feet deep, and constructed of schedule 40 black steel.	Carried supplied air to JN-3	None expected	
Water Lines	NA	~ 1400 feet in length	NA	1977	The water lines were installed in 1977 and are in good condition. The north well house is interconnected to pump the water to the water tower, and the water is gravity fed to the entire system. These lines are estimated to be approximately 1400 feet in length, 2 to 4 inches in diameter, buried 4 to 5 feet deep, and constructed of galvanized or cast iron/steel.		None expected	
Telephone Lines	NA	~ 500 feet in length	NA	UNK	The telephone lines appear to follow the same routing as the fiber optics lines, entering West Jefferson North through JN-7, which is north of JN-4. They are then distributed underground to JN-1, JN-2, and JN-3. These lines are expected to be uncontaminated and are estimated to be approximately 500 feet in length, 1 to 3 inches in diameter, buried 1 to 3 feet deep, and contained in PVC conduit or directly buried. Telephone manhole(s) are to be remediated with telephone lines.		None expected	

Exhibit 1 - Areas to be Decontaminated and Decommissioned

Building/ Area Name	Number	Area sq. ft.	Floors	Year Constructed	Construction/Layout	Past Usage/Scoping Statement	Radiological Contamination Type	Comments
Tanks & Sumps								
Tanks and Sumps	NA	110 gallons	NA	2002	Mobile, above ground diesel fuel tank. Holds 110 gallons with 110% secondary containment; presently 1/2 full.	Steel	No data available	
Tanks and Sumps	NA	110 gallons	NA	2002	Mobile , above ground diesel fuel tank. Holds 110 gallons with 110% secondary containment; presently 1/2 full.	Steel	No data available	
Tanks and Sumps	NA	550 gallons	NA	UNK	JN-1 Diesel Fuel Storage Tank - JN-1 Back yard area. External above ground diesel fuel tank. Holds 550 gallons with 110% secondary containment; presently 1/ 2 full.	Steel	No data available	
Tanks and Sumps	NA	550 gallons	NA	UNK	JN-2 Spent Solution/Radioanalytical Lab (RAL) Tank - JN-2 North yard area - 550 gallons Fiberglass. In use.	Fiberglass	See Survey J- 24465 in Radiological Conditions section	
Tanks and Sumps	NA	135,717 gallons	NA	UNK	JN-3 Reactor Coolant Pump Tank – JN-3 the north-east yard outside of the building. The external water storage tank (36x36x15h) piping links the building to the reactor pump room.	Concrete	See surveys J-23125, J-23164 in Radiological Conditions section	
Tanks and Sumps	NA	8,000 gallons 8 feet in diameter by 23 feet 3 inches long.	NA	1980	JN- 1 Fuel Oil Tank - Southeast Backyard area - Tank supplies #2 fuel oil to the JN- 1 boiler on an as needed basis. It is normally run by natural gas. This tank is exempt from federal and state regulations, since it "contains heating oil for consumptive use." Dimensions: 8 feet in diameter by 23 feet 3 inches long. The JN- 1 tank is about 12 years old and sits behind the Machine Shop. The bottom of the tank is located 122 inches below ground level. It sits on a concrete base and is held to the base with fiberglass straps bolted to the base. The entire hole is filled with small stones with a layer of soil on top. There is about 4 feet of stones/ soil above the tank. Tank is made of single layer fiberglass and holds a capacity of about 8,000 gallons. The tank is 1/ 2 full and presently set up for use. Tank has ground sampling well. Simple pipe that runs down through the stones to the concrete base.	Single layer fiberglass which is a replacement for the original steel tanks	No data available	
Tanks and Sumps	NA	8,000 gallons 8 feet in diameter by 23 feet	NA	1980	JN-2 Fuel Oil Tank - JN- 2 West yard area - Tank supplies #2 fuel oil to the JN- 2 & JN- 3 boiler on an as needed basis. It is normally run by natural gas. This tank is exempt from federal and state regulations, since it "contains heating oil for consumptive use." Dimensions: 8 feet in diameter by 23 feet 3 inches long. The JN- 2 tank is about 21 years old and sits behind JN- 2. The bottom of the tank is located 139 inches below ground level. It sits on a concrete base and is held to the base with fiberglass straps bolted to the	single layer fiberglass which is a replacement for the original steel tanks	No data available	

Exhibit 1 - Areas to be Decontaminated and Decommissioned

Building/ Area Name	Number	Area sq. ft.	Floors	Year Constructed	Construction/Layout	Past Usage/Scoping Statement	Radiological Contamination Type	Comments
		3 inches long.			base. The entire hole is filled with small stones with a layer of soil on top. There is about 4 feet of stones/ soil above the tank. Tank is made of single layer fiberglass and each hold a capacity of about 8,000 gallons. The tank is 1/ 2 full and presently set up for use. Tank has ground sampling well. Simple pipe that runs down through the stones to the concrete base.			
Tanks and Sumps	NA	4X4X8	NA	1970	JN- 1 Dilution Sump - JN- 1 East backyard area. Dimensions: 4x4x8 Concrete; Abandoned, filled in.	Concrete	See Survey J- 24840 in Radiological Conditions section.	
Tanks and Sumps	NA	4X4X8	NA	1956	JN- 2 Dilution Sump - JN- 2 North yard area Dimensions: 4x4x8 Concrete; Isolated; contains solids and liquids.	Concrete	No data available	
Tanks and Sumps	NA	4X4X8	NA	1956	JN- 3 Sanitary/Dilution Sump - JN- 3 East yard area Dimensions: 4x4x8 Concrete; In use.	Concrete	No data available	
Tanks and Sumps	NA	5000 gallons each	NA	1997	JN-10 Sewage Holding Tanks - 2 tanks 5000 gallons each. Dimensions are 15 ft. 8. in long, 6 ft. 10 in. wide, and 10 ft. 4 in. high. Tanks have connecting pipes and a visual alarm at 6000 gallons. They are underground with risers and vented lids. Located back of a parking area. Currently in use to support the Administrative Complex Trailers.	Concrete	None expected	
External Areas								
Road and JN-1 Front Apron	NA	NA	NA	NA	The road leading from the JN-1 parking lot into the Site Area and the JN-1 front apron may be contaminated in spots.	Asphalt layers	No data available	
JN-1 Perimeter	NA	NA	NA	NA	JN- 1 Backyard Asphalt area behind JN- 1 Evaporator in the past has overflowed into the backyard JN- 1 Loading dock - High bay truck entry. Historical knowledge that trucks have leaked here in the past.	Asphalt layers Concrete and asphalt	See Survey J- 24890 in Radiological Conditions section.	
Building JN-4 Related Areas	NA	NA	NA	NA	Dirt road outside fenced area behind JN- 4 Outside the North outer perimeter fence	Typical soil for area	No data available	
Filter Beds	NA	Area inside the perimeter fences approx. 2	NA	1955 1958 1979	Located between the north site and Darby Creek to the east. The area also contains the sewage treatment system for the middle site that operates independently from the north site beds. The active North and Middle filter beds are currently in use.	There have been a total of three filter beds used to process sewage water generated from the north site. There are two abandoned	See "Radioactive Inventory of the Abandoned North Filter Beds	Active North Filter Bed- no contaminatio n found around

Exhibit 1 - Areas to be Decontaminated and Decommissioned

Building/ Area Name	Number	Area sq. ft.	Floors	Year Constructed	Construction/Layout	Past Usage/Scoping Statement	Radiological Contamination Type	Comments
		acres				beds in addition to the third bed that is currently in use. The first abandoned bed was in use from approximately 1955 when the first building, JN-1, was constructed until 1958. The second bed began operation in 1958 and was operated until 1979. The third bed has been in use since 1979.	& Limit Fractions"	perimeter. Unknown if contamination under bed.
Outfall	SS-JN3-1	NA	NA	NA	Drainage Area: Foundation and roof of JN-3 Location: At water's edge at head of cove of Battelle Lake, west of JN-2.		See Characterization Report for Storm Sewer Outfalls at West Jefferson Site file: Anorth_site_outfalls_9407" in the Characterization and Release Folder.	
Outfall	SS-JN3-2	NA	NA	NA	Drainage Area: Foundation and roof of JN-3 Location: On steep bank at head of cove of lake, west of JN-2, very near outfall SS-JN3-1		See Characterization Report for Storm Sewer Outfalls at West Jefferson Site file: Anorth_site_outfalls_9407" in the Characterization and Release Folder.	
Outfall	SS-SD-1	NA	NA	NA	Drainage Area: Surface drain between JN-2 and JN-3 Location: Near top of steep bank at head of cove, west of JN-2, east of SS-JN3-1		See Characterization Report for Storm Sewer Outfalls at West Jefferson Site file: Anorth_site_outfalls_9407" in the Characterization and Release Folder.	

Exhibit 1 - Areas to be Decontaminated and Decommissioned

Building/ Area Name	Number	Area sq. ft.	Floors	Year Constructed	Construction/Layout	Past Usage/Scoping Statement	Radiological Contamination Type	Comments
Outfall	SS-JN2-1	NA	NA	NA	<p>Drainage Area: Foundation and roof of JN-2</p> <p>Location: In flat field between JN-2 and JN-3 near a 6- inch drainage pipe under security fence.</p>		See Characterization Report for Storm Sewer Outfalls at West Jefferson Site file: Anorth_site_outfalls_9407" in the Characterization and Release Folder.	
Outfall	SS-SD-2	NA	NA	NA	<p>Drainage Area: Surface drain in front of JN-1</p> <p>Location: On steep bank of lake south of JN-1</p> <p>Remediated in 1994 but needs verification.</p>		See Characterization Report for Storm Sewer Outfalls at West Jefferson Site file: Anorth_site_outfalls_9407" in the Characterization and Release Folder.	
Outfall	SS-JN-1-1	NA	NA	NA	<p>Drainage Area: Foundation and roof of JN-1</p> <p>Location: On steep bank of lake, south-southeast of JN-1</p> <p>Remediated in 1994 but needs verification.</p>		See Characterization Report for Storm Sewer Outfalls at West Jefferson Site file: Anorth_site_outfalls_9407" in the Characterization and Release Folder.	
Outfall	SS-JN1-2	NA	NA	NA	<p>Drainage Area: Foundation and roof of JN-1</p> <p>Location: On steep bank of lake, south-southeast of JN-1</p>		See Characterization Report for Storm Sewer Outfalls at West Jefferson Site file: Anorth_site_outfalls_9407" in the Characterization	

Exhibit 1 - Areas to be Decontaminated and Decommissioned

Building/ Area Name	Number	Area sq. ft.	Floors	Year Constructed	Construction/Layout	Past Usage/Scoping Statement	Radiological Contamination Type	Comments
					NOTE: This outfall was remediated. See "Remediation Status Report for the West Jefferson North Site Outfalls SS-JN1-2 and SS-JN1-4 Bog Area."		and Release Folder.	
Outfall	SS-JN1-3	NA	NA	NA	Drainage Area: Foundation and roof of JN-1 Location: West of outer security fence west of JN-1 and well house		See Characterization Report for Storm Sewer Outfalls at West Jefferson Site file: Anorth_site_outfalls_9407" in the Characterization and Release Folder.	
Outfall	SS-JN1-4	NA	NA	NA	Drainage Area: Water Sampling Location 605 Location: West of outer security fence west-northwest of JN-1, east of road NOTE: This outfall was remediated. See "Remediation Status Report for the West Jefferson North Site Outfalls SS-JN1-2 and SS-JN1-4 Bog Area."		See Characterization Report for Storm Sewer Outfalls at West Jefferson Site file: Anorth_site_outfalls_9407" in the Characterization and Release Folder.	
Site Monitoring and Dewatering Wells	NA			1989 – contract award	There are approximately 20-30 groundwater monitoring and dewatering wells at the WJN site. The groundwater supply well for WJN (at a depth of approximately 130 to 160 ft) is not to be removed. The monitoring and dewatering wells include: till monitoring wells, filter bed monitoring wells, the 885 sand monitoring wells, the 855 sand monitoring wells, the basal sand watering wells, and the JN-3 external de-watering wells.		See Site Environmental Report for Calendar Year 2001	See Environment al Monitoring Program Plan DD-98-01 file See "BCLDP Groundwater Plan, West Jefferson North Site"
Rainwater Conductors	NA	~ 1760 feet in length	NA	NA	Rainwater conductors are comprised of clay pipes or concrete tile for carrying rainwater from the down-spouts to the lake and outfall areas. The rainwater conductors to the east of JN-1 are expected to be contaminated and require remediation and disposal as contaminated waste. The rainwater conductors from the other buildings are not expected to be contaminated. These lines tie into		See Surveys J-24866 J-24840 J-24466	

Exhibit 1 - Areas to be Decontaminated and Decommissioned

Building/ Area Name	Number	Area sq. ft.	Floors	Year Constructed	Construction/Layout	Past Usage/Scoping Statement	Radiological Contamination Type	Comments
					storm sewer outfall lines and are estimated to be 6 to 12 inches in diameter at a depth of 1 to 6 feet (dependent on slope and grade discharge elevation).		J-24876 J-24877 J-23118 in Radiological Conditions section.	
Other Grounds Inside the Fence	NA	NA	NA	NA	Inside fenced area. North of JN- 3 is a hot spot in the asphalt. A spill occurred during water transfer on the north driveway of JN- 2. A hot spot just south of the JN- 3 annex close to building and one north of the building on asphalt. Also, a cooling tower was removed from within the fenced area, west of JN-3. Grass zone - Inside the fence - In the backyard of JN- 1 is a decontamination pit covered with timbers	Asphalt layers	See Survey J- 24890 in Radiological Conditions section.	
Unaffected Areas Outside Security Fence	NA	NA	NA	NA	Access Road - Outside fenced area	Asphalt layers	No data available	
Parking Lots and Lights Outside the Security Fence	NA	NA	NA	NA	Parking Lot - Outside fenced area near JN- 10 & JN- 11	Asphalt layers	No data available	
Signal Cable and Security Fence	NA	~ 2940 feet in length	NA	NA	The existing signal cable was installed between the fences for security and may be obsolete. Neither the signal cable nor the fences are expected to be contaminated. These lines are estimated to be approximately 2940 feet in length, 1 inch in diameter, buried 2 to 3 feet deep, and constructed of galvanized rigid conduit. Fences - Inner and Outer- A 17 feet buffer secure zone separates these fences which encompass the North site	Chain link and barbed wire	See survey J-24890.	
Miscellane ous								
Emergency Diesel Generator	NA	NA	NA	NA	There are three (3) emergency generators and one (1) portable generator emergency generator.			

Exhibit 1 - Areas to be Decontaminated and Decommissioned

Building/ Area Name	Number	Area sq. ft.	Floors	Year Constructed	Construction/Layout	Past Usage/Scoping Statement	Radiological Contamination Type	Comments
Sea/Land Container	AS401285	8x8x40ft.	NA	NA	West of JN- 1 - Man Hole Tripod; Propane Heater; Shipping Bag Liners; 12 @ HEPA holes; 55 Gallon Barrel Vacpac Air Vacuum ;4 Tons of Steel Grit; PVC Pipe Fittings; Safety Railings; Small Grit Blaster; Pallet Jack; HEPA Exhaust System ; Fence Wire; Misc. Supplies.		Radiologically Controlled	GI- 100605
Sea/Land Container	AS872014 2	8x8x20 ft	NA	NA	South of JN- 3 - Out of Service HEPAs #1191, #WJ- 02; (3) 30 Gallon Dry Transfer Systems: Large Grit Blasters #06 and #03; Shelves of D& D Misc. Tools			GI- 100606
Sea/Land Container	AS572017 1	8x8x20 ft	NA	NA	South of JN- 2 - Evaporator Boilers from JN1 High Bay		Radiologically Controlled	Leased
Sea/Land Container	186288	8x8x40 ft	NA	NA	West of JN- 1 - Environmental Water Samples			GI- 100662
Sea/Land Container	AS20883	8x8x20 ft	NA	NA	South of JN- 3 - Out of Service HEPAs #1112,# 1128,# 1123; (6) Jack Stands; (10) Stallions : (2) Small Grit Blasters; Air Manifold System -		Radiologically Controlled	Leased
Sea/Land Container	AS20875	8x8x20 ft	NA	NA	West of JN- 1 - Waste Management Barrel Liners; THP30 Barrels; (10) TRU Waste Pipe Cask; (2) Over Pack Liners; Roll of Plastic Sheeting			GI- 101412
Sea/Land Container	AS20875	8x8x20 ft	NA	NA	West of JN- 1 - Waste Management Misc. Sampling Tools; Sock Filters; Absorbent Pads; Pressure Washer; B25 Box Liners		Radiologically Controlled	Leased
Sea/Land Container	NA	8x8x20 ft	NA	NA	West of JN- 1 - Absorbent Materials; (2) Tool Box with Misc. Tools; Tie down Chains for Shipping ; Shipping Straps and Slanges; Cabinet of Water Filters; Postings for Shipping ; B25 Box Liners ; Soil Bags.			Leased
Sea/Land Container	4405463	8x8x40 ft.	NA	NA	West of JN- 1 – Respirator./ Laundry Bins			GI-100984
Sea/Land Container	SVNBC06 30	8x8x40 ft	NA	NA	West of JN- 1 - Environmental Spill Kit and Drum Dolley.		Radiologically Controlled	GI-100176
Sea/Land Container	210810	8x8x20 ft	NA	NA	South of JN- 2 - TRU Waste Packing Supplies- Spacers, B/ Liners, Pre-filter Cloth, Scaffold Shelfe , Sampling Containers; Pallet Jack #GI- 95958			GI- 93730
Sea/Land Container	1032139	8x8x40 ft	NA	NA	North of JN- 1 - Characterization Ladders; Carts Shelves of Misc. Tools; Geoprob Sampling Containers; Geoprob Equipment and Tools; File Cabinet of Supplies and Tools for ; P10 Bottles for operation of Esp2 Meters; Small Generator			Leased
Manholes	NA	NA	NA	NA	Manholes will be remediated with the connecting piping runs.			

Exhibit 1 - Areas to be Decontaminated and Decommissioned

Building/ Area Name	Number	Area sq. ft.	Floors	Year Constructed	Construction/Layout	Past Usage/Scoping Statement	Radiological Contamination Type	Comments
					<p>Manhole 1 - North Area Chemical Manhole Northwest JN-3</p> <p>Manhole 2 - North Area Chemical Manhole Southeast JN-3</p> <p>Manhole 3 - North Area Storm Manhole North JN-3</p> <p>Manhole 4 - North Area Storm Manhole Southeast JN-3</p> <p>Manhole 5 - North Area Chemical Manhole Southeast JN-3</p> <p>Manhole 6 - North Area Chemical Manhole South JN-3</p> <p>Manhole 7 - North Area Chemical Manhole Southeast JN-1</p> <p>Manhole 8 - North Area Sanitary Manhole Northeast JN-2 (in street)</p> <p>Manhole 9 - North Area Chemical Waste Manhole Northeast JN-3</p> <p>Manhole 10 - Not Part of Project</p> <p>Manhole 11 - North Area Sanitary Manhole South JN-1</p> <p>Manhole 12 - North Area Chemical Manhole Southeast JN-4 (near back gate)</p> <p>Manhole 13 - North Area Storm Manhole East JN-1</p> <p>Manhole 14 - North Area Chemical Manhole East of North Plant,</p>			

Exhibit 1 - Areas to be Decontaminated and Decommissioned

Building/ Area Name	Number	Area sq. ft.	Floors	Year Constructed	Construction/Layout	Past Usage/Scoping Statement	Radiological Contamination Type	Comments
					<p>West of Roadway</p> <p>Manhole 15 - North Area Chemical Septic Tank Manhole East of North Plant, West of Road (may already be abandoned)</p> <p>Manhole 16 - North Area Chemical Manhole East of North Plant, West of Road</p> <p>Manhole 17 - North Storm Manhole East of North Plant West of Road</p> <p>Manhole 18 - North Area Storm Manhole Catch Basin Southeast JN-1</p>			
Manholes	NA	NA	NA	NA	<p>Manhole 19 - North Area Sanitary Manhole East of North Plant West of Road</p> <p>Manhole 20 - North Area Sanitary Manhole East of North Plant West of Road (may already be abandoned)</p> <p>Manhole 21 - North Area Sanitary Manhole above West Middle Area Waste Treatment</p> <p>Manhole 22 - North Area Sanitary Outflow Manhole East of North Sanitary Filter</p> <p>Manhole 23 - North Area Sanitary Outflow Manhole East of North Sanitary Filter</p> <p>Manhole 24 - North Area Chlorination Tank North Sanitary</p> <p>Manhole 25 - North Area Sanitary Outflow From Middle Site Filter (may already be abandoned)</p>	NA		

Exhibit 1 - Areas to be Decontaminated and Decommissioned

Building/ Area Name	Number	Area sq. ft.	Floors	Year Constructed	Construction/Layout	Past Usage/Scoping Statement	Radiological Contamination Type	Comments
					<p>Manhole 26 - North Area Sanitary Outflow Manhole from North Sanitary Filter</p> <p>Manhole 27 - North Area Sanitary Trash Trap & Dosing Pump Chamber, North Waste Plant</p> <p>Manhole 28 - North Area Sanitary Manhole East of North Waste Sand Filters</p>			